

09/006324

ABSTRACT

The present invention discloses redundant sealing systems for composite risers having metal liner assemblies and methods of preventing interior fluid leakage to the outside of composite risers. An elastomeric seal is formed between an elastomeric tip provided on the end of a metal to composite interface (MCI) of the liner assembly and an elastomeric shear ply provided over the liner assembly. The elastomeric seal and a mechanical seal between the MCI and a transition ring which secures the liner to the MCI, provides a dual sealing system for the composite riser to prevent leakage of interior fluids. In the event that the integrity of the mechanical seal or the integrity of the liner is compromised, the elastomeric seal would prevent leakage of the fluid to the outside of the composite riser.